Case 2.—This patient was sent to the clinic from the Eye Infirmary in 1934 when she was 14½ years old. She had bilateral interstitial keratitis, Hutchinson's teeth and deafness; the Wassermann reaction was positive.

Anti-syphilitic treatment was begun at once and continued irregularly until 1940, by which time 9 grammes of neoarsphenamine, 17·5 grammes of bismuth and 1·5 grammes of mercury had been given. The condition of the eyes responded poorly to treatment; in 1937 an increasing intra-ocular tension was observed and she developed buphthalmos of both eyes. She was referred again to the Eye Infirmary, where a wide iridectomy was performed on the left eye. The right eye was blind and enucleation was advised; this was not carried out until after the supervention of a severe glaucoma in 1940.

Commentary

Buphthalmos (infantile glaucoma, ox-eye) is usually described as a congenital condition due to a developmental abnormality at the angle of the anterior chamber, which obstructs the free drainage of the aqueous humour, so that the intra-ocular tension is raised and a condition of congenital glaucoma results. The coats of the eye are sufficiently plastic in the young to stretch under the increased tension, so that the whole eye is enlarged.

Cases have been encountered, however, of supposed inflammatory origin and the two cases described appear to be of this nature. Although the infection was undoubtedly congenital in both cases, the eyes were apparently normal until the onset of interstitial keratitis and associated irido-cyclitis at the ages of 14 and 16 years respectively. The inflammatory changes at the angle of the anterior chamber led to a secondary glaucoma and stretching of the coats of the eye at an unusually late age (17½ and 26 years respectively). Congenital syphilis as a possible aetiological factor has not, so far as I am aware, been suggested previously.

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(3) GONOCOCCAL ARTHRITIS RESISTANT TO HYPERPYREXIA

A female patient aged 40 years was admitted on 1st February 1943, when she was seven months pregnant, with the following history.

On 5th November 1942 the patient had attended another clinic, where an early gonococcal infection was diagnosed; smears showed gonococci in the urethra but not in the cervix; the Wassermann reaction and gonococcal complement fixation test were negative; there were not any complications.

Treatment was begun with sulphathiazole 3 grammes daily for seven days, assisted by douches and urethral irrigations from the 9th November. On 23rd November smears showed no gonococci in the urethra, but gonococci were now found in the cervix, and on her next attendance a further course of sulphathiazole was given—4 grammes daily for three days, then 3 grammes daily for four days. Local treatment was continued as before. On 10th December gonococci were again found in the cervical smear.

A month later the patient was admitted to hospital with acute arthritis of the right knee. The gonococcal complement fixation test was strongly positive. Details of the subsequent treatment were not available. Nineteen days before she was transferred to Newcastle the right leg had been encased in a plaster which was removed after eleven days, when aspiration of the knee joint yielded a purulent exudate.

Condition on admission (1st February 1943). The right knee joint showed marked swelling and thickening of the periarticular structures. The head of the tibia was subluxated and there was a contracture to about 25°—30° of flexion; movement was extremely painful and limited to 10° or 15°.

Genital examination revealed no abnormality apart from a slight muco-purulent vaginal discharge; smears from urethra and cervix were negative for gonococci.

Whereas hyperpyrexial treatment was obviously the method of choice, the possible effect of this on the pregnancy had to be considered. In one previous case—a tabetic in whom pregnancy had not been detected—a series of six fevers

of from 4½ to 5 hours duration each failed to disturb the pregnancy. In another case of refractory secondary syphilis pyrexial treatment was begun despite a 22 weeks' pregnancy ; the first fever was followed in less than 24 hours by the delivery of a macerated still-born foetus. Although in the latter case it was most probable that syphilis and not the fever was the cause of foetal death, it was not considered justifiable to employ fever therapy in the patient now being treated, who was extremely desirous of having a live child. (We should now have no hesitation in employing fever therapy in the presence of pregnancy, as we have recently subjected a patient with juvenile general paralysis of the insane who was five months pregnant to a course of six fever sessions and the pregnancy continued uneventfully to term.)

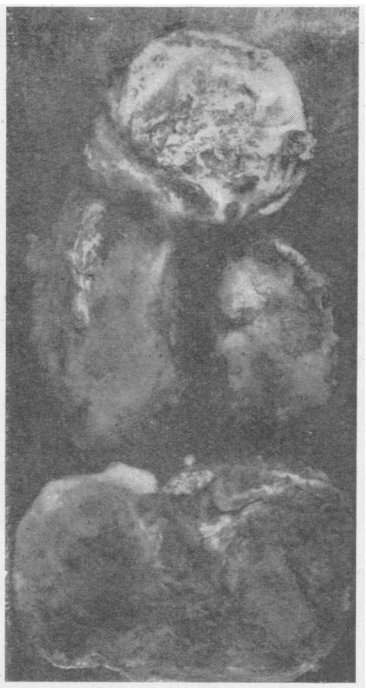

Fig. 1.—Photograph of operation specimen: surgical excision of the knee joint showing erosion of cartilage of patella, femoral condyles and tibia.

It was decided therefore that the best line of treatment would be a Caesarean section at the 32nd week followed by fever therapy. Meanwhile, local splinting of the joint and intravenous gonococcal vaccines were administered, with some easing of the pain but no marked clinical improvement of the joint. On the 27th February 1943, the patient was delivered normally of an eight-months female infant, who developed gonococcal ophthalmia neonatorum.

Pyrexial treatment was carried out from the 18th March to the 7th April, with complete bacteriological cure of the genital condition. Four fever sessions, each of 8 hours' duration, at temperatures of 105·4-106·6°F., produced no relief of pain and no increased freedom of movement. Massage and remedial exercises failed to increase movement, which was limited chiefly by pain. X-ray of the knee joint showed some erosion of the head of the tibia, particularly of the lateral margin, and the joint space was reduced. In view of the unsatisfactory condition, surgical opinion was sought with a view to (1) straightening the limb under an anaesthetic, maintaining a good position in plaster and waiting to see whether a painless ankylosis would follow, or (2) surgical excision of the joint. The second of these two courses appeared to offer the speediest prospect of permanent relief and on the 29th April an excision of the knee joint was performed. The operation specimen shows marked erosion of the cartilages of the patella, of the femoral condyles and of the head of the tibia, with small fibrous adhesions between the bones in many areas. (See Fig. 1.)

It seems possible that without operation a fibrous ankylosis would have occurred ; whether this would have been sufficiently painless to secure a useful limb is a matter of speculation.

The subsequent progress was uneventful. The risk of post-operative gonococcal sepsis appears to have been adequately controlled by the fever therapy.

The successful hyperpyrexial treatment of gonococcal arthritis depends upon its early application, before the formation of adhesions.

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